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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/824,156

04/14/2004

David G. Land

04E007

6382

7590

08/28/2006

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EXAMINER

CHAMBERS, TROY

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/824,156		LAND, DAVID G.	
	Examiner		Art Unit	
	Troy Chambers		3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8,10,11 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8,10,11 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/09/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

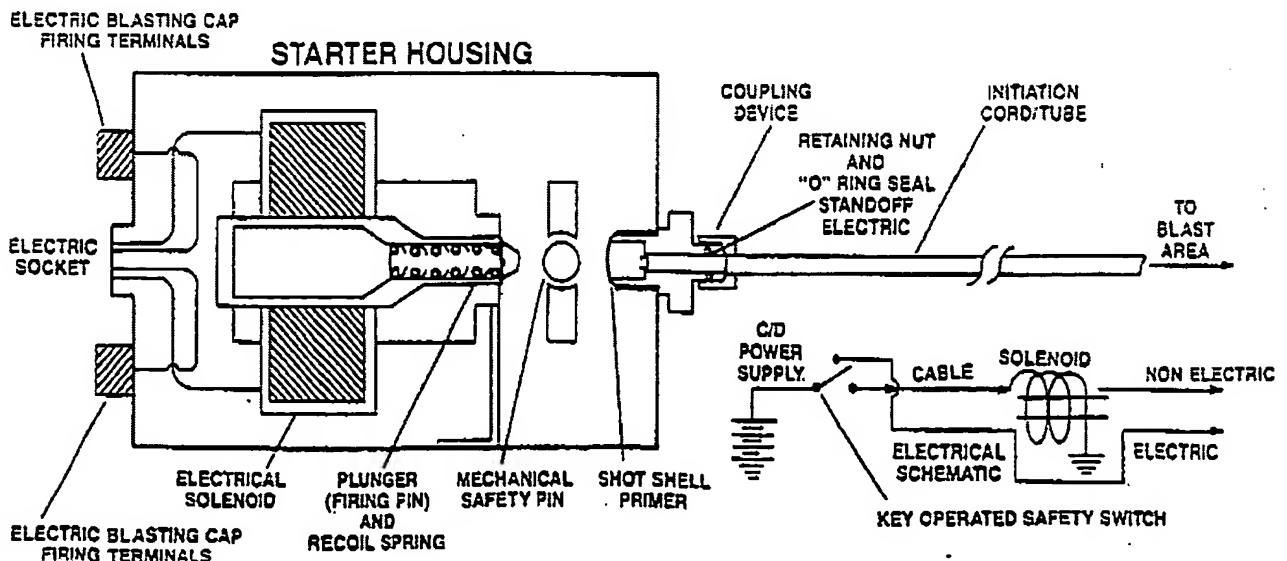
Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 10, 11, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4962708 issued to Snyder et al. (hereinafter "Snyder") in view of US 6867512 issued to Delaire et al. (hereinafter "Delaire") and in further view of US 6546873 issued to Andrejkovics et al. (hereinafter "Andrejkovics").

3. Snyder discloses a detonator initiator comprising:



a. a linear actuator assembly having

- i. a core
- ii. a coil (solenoid)
- b. a capacitor

Snyder does not disclose a core with a permanent magnet or an electrical circuit for monitoring the charge on the capacitor.

4. Delaire discloses a valve actuator comprising:

- c. a linear actuator assembly having
 - iii. a solenoid 24
 - iv. permanent magnet 26

5. Andrejkovics discloses an apparatus for activating a remote device comprising:

- d. a receiver
- e. a capacitor col. 6, line 45
- f. a controller and microprocessor
 - to monitor capacitor charge col. 7, ll. 45-62.
 - v. support logic Fig. 5
 - vi. timer Fig. 5

6. At the time of the invention, one having ordinary skill in the art would have found it obvious to provide the detonator initiator of Snyder with the permanent magnet of Delair. The suggestion/motivation for doing so would have been to provide increased armature force and increased travel so as to improve controllability and increase flow.

7. At the time of the invention, one having ordinary skill in the art would have found it obvious to provide the linear actuator assembly of Snyder with the capacitor charge

monitoring circuit of Andrejkovics. The suggestion/motivation for doing so would have been to provide a means for delaying firing of the device until the capacitor has reached the required charge.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Snyder, Delaire and Andrejkovics as applied to claim 1 above, and further in view of US 3792663 issued to Schneider. The combined device to Snyder, Delaire and Andrejkovics is as described above. However, neither reference appear to disclose a component to adjust the charge threshold based on ambient temperature.

Schneider discloses an electrochemical timing apparatus including a thermistor 52 for automatically controlling the rate of a wire in response to ambient temperature variations.

9. At the time of the invention, one having ordinary skill in the art would have found it obvious to provide the combined device of Snyder, Delaire and Andrejkovics with the electrochemical timing apparatus of Schneider. The suggestion/motivation for doing so would have been to provide for a self-destruct option for ordinance devices to avoid undesired ignitions.

Response to Arguments

10. Applicant's arguments filed 06/09/2006 have been fully considered but they are not persuasive. Applicant's amendment to claim 1 has not made it clear whether the "digital logic gate configured as a comparator" is a positively recited element of the claim necessary for patentability. For instance, before claim 9 was cancelled, it recited a circuit including a digital logic gate. However, the "wherein" clause of amended claim

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1 does not make clear the inclusion of the digital logic gate. The applicant should amend claim 1 so that the circuit is described such that the gate is positively recited followed by a clause describing how the circuit is used.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

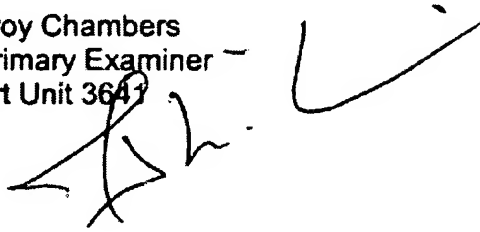
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Troy Chambers whose telephone number is (571) 272-6874 between the hours of 7:00 a.m. to 3:30 p.m., M-F. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone, can be reached at (571) 272-6873.

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Troy Chambers
Primary Examiner
Art Unit 3641

A handwritten signature in black ink, appearing to be 'T. Chambers', written over the printed name and title.

Troy Chambers
Primary Examiner
Art Unit 3641

TC
20 August 2006